

REMARKS

The Office Action dated October 3, 2008, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Status of the Claims

Claims 1, 2 and 19 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added. Claims 8-18, 20 and 21 were withdrawn by the Examiner in accordance with the Response to Restriction Requirement filed July 25, 2008, electing Group I, which consists of claims 1-7 and 19. Thus, claims 1-7 and 19 are currently pending in the application and are respectfully submitted for consideration.

Objection to the Specification

On page 2, the Office Action objected to the paragraph beginning at page 15, line 5, of the specification as allegedly being “nonsensical”. Specifically, the Office Action asserted that “[t]he paragraph purports to define the term ‘keystone state’ but does so simply by defining the it [sic] as a state due to the keystone effect, i.e. the keystone effect.” However, the keystone effect is discussed in the present specification and Applicants respectfully traverse the objection.

The present specification discusses that “[a] plurality of rolling elements 3, whose number is one less than all of the rolling elements 3 to be finally mounted, is arrayed between the flanges on the cylindrical inner circumferential wall surface 2” and that this

“process of arraying the rolling elements 3 along the cylindrical inner circumferential wall surface 2 of the roller 1 is referred to as a keystone process” (see page 1, line 25, through page 2, line 1, and page 2, lines 15-17). The present specification further discusses that “[a]ccording to the assembling process disclosed in Japanese Laid-Open Patent Publication No. 10-184717, the interference needs to be provided for the final rolling element 3a to be pressed into the gap between the two rolling elements 3 for the purpose of achieving the keystone effect” (see page 2, lines 21-26). Numerous references to keystone process, effect or state are presented in the specification. As such, Applicants submit that a person of ordinary skill in the art would readily understand the claimed keystone state in light of the discussion in the specification and the discussion of JP 10-184717.

Applicants also note that MPEP § 608.01(g) states that the detailed description “should provide clear support **or** antecedent basis for the claims” (emphasis added). As such, there is no strict requirement that verbatim antecedent support for claim recitations (i.e. the same exact words) be provided in the specification. Rather, it is sufficient that the claimed features be clearly supported by the specification. Thus, the conclusory assertion in the Office Action that not defining the term renders it “nonsensical” is contrary to the MPEP.

Accordingly, it is respectfully submitted that the objection is overcome and respectfully requested that the objection be withdrawn.

Rejection under 35 U.S.C. § 112

On pages 2 and 3, the Office Action rejected claims 2-4 and 19 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. With respect to claim 2, the Office Action asserted on page 2 that “what constitutes a ‘keystone state’ is nonsensically defined in the specification.” However, per the above, adequate support for the term exists in the specification, the cited Japanese application and in the knowledge of one of ordinary skill in the art. Thus, Applicants respectfully submit that the rejection is improper with respect to claim 2.

With respect to claims 3 and 19, the Office Action asserted on page 3 that “[c]laims 3 & 19 recite the limitation, ‘a radial clearance defined between said inner circumference wall surface and outer circumference surfaces of said rolling elements.’ It is unclear how such a clearance can be present given that the specification expressly discloses these surfaces as being in contact, i.e. without clearance between them. See, for example, page 3, line 27; page 15, lines 23 and page 16, line 27.” Applicants note that these features are discussed with respect to Fig. 9 and the discussion thereof on page 17, line 7, through page 19, line 8, of the present specification. “The radial clearance A may be set to a value in the range from several μm to several tens of μm ” (see page 17, lines 10-12, of the present application). Thus, while in some embodiments, the rolling elements may be in contact with the inner circumference wall surface, in some other embodiments, there may be a radial clearance, as is clearly supported by the present application.

With respect to claim 4, the Office Action asserted that “[t]he term ‘several’ is a relative term which renders the claim indefinite. The term ‘several’ is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.” Applicants respectfully traverse the rejection.

MPEP § 2173.05(b) states that:

The fact that claim language, including terms of degree, may not be precise, does not automatically render the claim indefinite under 35 U.S.C. 112, second paragraph. *Seattle Box Co., v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed, in light of the specification.

“When a term of degree is presented in a claim, first a determination is to be made as to whether the specification provides some standard for measuring that degree. If it does not, [which is not admitted] a determination is made as to **whether one of ordinary skill in the art, in view of the prior art and the status of the art, would be nevertheless reasonably apprised of the scope of the invention**” (*Id.*). In the present case, claim 4 recites that “said radial clearance is in a range from several μm to several tens of μm .” The term “several” is commonly understood to be more than two, and the word “several” is clearly not more than nine in the context claimed. Thus, it may be readily ascertained that the claim encompasses ranges that are, at the largest, from 3-99 μm , which is finite and determinable. Were it more than this, the term “hundreds” would have clearly been used.

Applicants submit that a person of ordinary skill in the art would readily understand, based upon the implementation at hand and the recitation of the claim, what “several” constitutes. Accordingly, since a person of ordinary skill in the art would readily appreciate the scope of the claimed invention, we believe the rejection of claim 4 is improper. Also, the conclusory assertion in the Office Action that “[t]he term ‘several’ is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention” is insufficient to establish a *prima facie* case for the rejection. Further, “several” is an absolute term, not a relative term.

Accordingly, it is respectfully submitted that the rejection is overcome and respectfully requested that the rejection be withdrawn.

Rejection under 35 U.S.C. § 102

Claims 1-3, 5-7 and 19 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Goto et al. (U.S. Patent No. 5,989,124). The Office Action took the position on pages 3-5 that Goto et al. discloses all of the features of the rejected claims. Applicants respectfully traverse the rejection. Reconsideration of the claims is respectfully requested.

Independent claim 1, from which claims 2-7 depend, recites a tripod constant velocity joint including a tubular outer member for connection to a transmission shaft. The tubular outer member has a plurality of guide grooves defined in an inner wall surface thereof that are spaced from each other and extend in an axial direction of the

tubular outer member. The tripod constant velocity joint also includes an inner member for connection to another transmission shaft. The inner member is disposed in an opening defined in the tubular outer member. The inner member has a plurality of trunnions projecting respectively into the guide grooves. The tripod constant velocity joint further includes a ring-shaped roller fitted over each of the trunnions and held in contact with surfaces defining the guide grooves and a plurality of rolling elements rollingly interposed between each of the trunnions and the roller. The roller has an inner circumferential wall surface. Additionally, the tripod constant velocity joint includes a one-sided flange projecting radially from an axial end of the inner circumferential wall surface and a holder mounted in an opposite axial end of the inner circumferential wall surface and holding the rolling elements. Before the holder is mounted in the roller, all rolling elements are inserted altogether as an annular array into the roller and placed onto the inner circumferential wall surface in an axial direction of the inner circumferential wall surface from the axial end thereof remote from the one-sided flange, and the rolling elements are retained in place.

Independent claim 19 recites a method of manufacturing a constant velocity joint having a tubular outer member having a plurality of guide grooves defined in an inner wall surface thereof that are spaced from each other and extend in an axial direction of the tubular outer member, a plurality of trunnions disposed in an opening defined in the tubular outer member and projecting respectively into said guide grooves, a ring-shaped roller fitted over each of the trunnions and held in contact with surfaces defining the

guide grooves, a plurality of rolling elements rollingly interposed between each of the trunnions and the roller, the roller having an inner circumferential wall surface, a one-sided flange projecting radially from an axial end of the inner circumferential wall surface, and a holder mounted in an opposite axial end of the inner circumferential wall surface and holding the rolling elements. The method includes, before the holder is mounted in the roller, arranging all rolling elements as an annular array, inserting all of the rolling elements altogether into the roller, and placing all of the rolling elements onto the inner circumferential wall surface in an axial direction of the inner circumferential wall surface from the axial end thereof remote from the one-sided flange with a radial clearance defined between the inner circumferential wall surface and outer circumferential surfaces of the rolling elements. The method also includes, after all the rolling elements are inserted altogether into the roller, installing the holder to hold the rolling elements on the opposite axial end of the inner circumferential wall surface of the roller.

As will be discussed below, Goto et al. fails to disclose or suggest all of the features of the presently pending claims.

Goto et al. generally discusses “a tripod type constant velocity universal joint which is applicable to front-wheel drive vehicles and others” (column 1, lines 5-7).

[A] tripod type constant universal joint comprises rollers rotatably carried, through cylindrical rolling elements, on three trunnions of a tripod member are accommodated, respectively, in thrack grooves formed in an inner circumferential surface of an outer member in an axial direction, so that the rollers are movable axially of the outer member along roller guide surfaces

at opposite sides of each of the track grooves and extending axially of the outer member, wherein an inner circumferential surface of the roller is cylindrical, and wherein a generatrix of an outer circumferential surface of the trunnion is defined with a combination of circular arcs at opposite ends of the trunnion and a curve between the circular arcs, the circular arcs having one and same center of curvature on the axis of the trunnion to constitute a part of a true circle, the curve having a radius of curvature larger than that of the circular arcs to be smoothly joined to the circular arcs.

(Column 3, lines 17-35, of Goto et al., all errors in original).

Independent claim 1 recites, in part, that “before said holder is mounted in said roller, all rolling elements are inserted altogether as an annular array into said roller and placed onto said inner circumferential wall surface in an axial direction of said inner circumferential wall surface from the axial end thereof remote from said one-sided flange, and the rolling elements are retained in place.” Independent claim 19, which has its own scope, recites similar features. The Office Action alleged that Figs. 26-28 of Goto et al. disclose these features. Applicants respectfully disagree.

Goto et al. discusses that “a stopper 10 for preventing a plurality of rolling elements 6 from falling out is formed on an inner circumferential surface of a roller 72 fitted through the rolling elements over the outer circumference of each of trunnions 55” (column 15, lines 38-42). “[A]ll the rolling elements 6 but one are **serially arranged** on the inner circumferential surface of the roller 72, and **the last one 6 is forced into a gap** defined between the two of this series rolling elements 6 positioned at both the ends thereof” (see Fig. 29A and column 16, lines 25-30, of Goto et al., emphasis added). On the other hand, claim 1 recites that **all rolling elements are inserted altogether** as an

annular array (see, for example, Fig. 5 and the discussion thereof in the specification). The discussion of “serially arranged” in Goto et al. appears to imply that the rolling elements of Goto et al. are inserted **one at a time**. However, even were the first set of rolling elements of Goto et al. inserted all at once, which is not admitted, one rolling element is explicitly left out and then forced into a gap “g” last. Thus, all elements in Goto et al. are explicitly not inserted altogether, as claimed.

Claims 2, 3 and 5-7 depend from independent claim 1 and add further features thereto. Thus, the arguments above with respect to the independent claims also apply to the dependent claims.

Per the above, Goto et al. fails to disclose or suggest all of the features of the above-rejected claims under 35 U.S.C. § 102(b). Accordingly, it is respectfully submitted that the rejection is overcome and respectfully requested that the rejection be withdrawn.

Rejection under 35 U.S.C. § 103

Claim 4 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Goto et al. Claim 4 depends from independent claim 1 and adds further features thereto. Thus, the arguments above with respect to the independent claims also apply to claim 4.

Accordingly, it is respectfully submitted that the rejection is overcome and respectfully requested that the rejection be withdrawn.

Conclusion

For at least the reasons presented above, it is respectfully submitted that claims 1-7 and 19, comprising all of the currently pending claims, patentably distinguish over the cited art. Accordingly, it is respectfully requested that the claims be allowed and the application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time
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